

Floods and River Linking

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Manifest Pedagogy

India is a nation of contrasts on one side of the country you see floods on the other you see droughts. Time and again whenever a severe drought or flood occurs the debate on the need for Interlinking of Rivers rises. It is a topic of Perpetual importance for both Prelims and Mains

In News

More than 12% Rainfall deficiency throughout India and Floods in Assam

Placing it in the syllabus

Geographical features and their location- changes in critical geographical features (including water bodies and ice-caps) and in flora and fauna and the effects of such changes.

Static Dimensions

- What is river linking/Interlinking of rivers?
- Drought prone Areas of India
- Flood Prone Areas of India
- Various plans on River Linking
- Organisations for River linking
- Advantages of River Linking
- Disadvantages of River Linking

Current dimensions

- Recent links which have been established
- Best Practices in the world on interlinking

What is river linking/ Interlinking of rivers?

- It is a project of linking two or more rivers by establishing manually created canals, and providing land areas that otherwise does not have river water access and reducing the flow of water to sea using this means.
- It is based on the assumption that excess water in certain rivers can be diverted to deficit rivers by establishing a channel network to interconnect the rivers Drought prone Areas of India
- **In India Interlinking of River (ILR) programme is of national importance and has been taken up on high Priority. The mission of this programme is to ensure greater equity in the distribution of water by enhancing the availability of water in drought prone and rain-fed area.**
- The Inter-link project has been split into three parts: a northern Himalayan rivers inter-link component, a southern Peninsular component and starting 2005, an intrastate rivers linking component.
- **Under the National Perspective Plan** (now called the National River Linking Project) **prepared by the Ministry of Water Resources, National Water Development Agency (NWDA)** has **already identified 14 links under Himalayan Rivers** Component and 16 links under Peninsular Rivers Component for inter basin transfer of water based on field surveys and investigation and detailed studies.
- Out of these, Feasibility Reports of 14 links under Peninsular Component and 2 links (Indian portion) under Himalayan Component have been prepared. Draft Feasibility Reports of 7 link projects (Indian portion) of Himalayan Component have also been completed



Flood prone areas of India



Various plans on River Linking in India



Organisations for River Linking

The river linking project is being managed by India's **National Water Development Agency** (NWDA), under its Ministry of Water Resources.

Advantages of River Linking

- **Hydropower generation:** The river interlinking project claims to generate total power of 34,000 MW (34 GW). Out of this, 4,000 MW will come from the peninsular component while 30,000 MW from the Himalayan component.
- **Curb drinking water woes:** The addition of hydropower is expected to curb the drinking water woes of millions and supply water to industries in drought-prone and water-scarce cities in south and west India
- **Irrigation:** The river linking project claims to provide additional irrigation to 35 million hectares (m ha) in the water-scarce western and peninsular regions.
- **Employment and Agriculture:** In addition to irrigation the project will further create employment, boost crop outputs and farm incomes and multiply benefits through backward (farm equipment and input supplies) and forward linkages (agro-processing industries). It may even help for fishing.

Disadvantages of River Linking

- **Costs:** The money planned to be spent on the river linking project is not economically feasible to a country like India
- **Environmental:** The environmentalists challenge that the project lacks holistic assessment of socio-economic impacts such as water-logging, salinisation and desertification. For example the Ken-betwa river link project resulted in felling of more than 1.8 million trees and also affected the Panna Tiger Reserve.

- States acceptance: Many of the states are not fully agreed with the river linking project as it may lead to the shortage of water to upper basin state
- Displacement of people: For the completion of Interlinking River project, many big dams, canals and reservoirs will have to be constructed due to which people around the land will be displaced.

Recent linking of rivers

Ken Betwa link project

- It aims to **link the rivers of Ken and Betwa and transfer the surplus water from Ken river to the betwa river** through a canal to irrigate the Bundelkhand region and it would benefit both Uttar Pradesh and madhya Pradesh in terms of meeting irrigation drinking water and electricity needs of people across 6 districts in the two states
- Ken-Betwa link project has been **declared as a National Project by the Government of India**
- It has received clearance from the Supreme Court of India, The National Board for Wildlife (NBWL) and the Environmental clearance

Other projects under pipeline

Damanganga-Pinjal Link Project and Par-Tapi-Narmada Link Project

- Both of them are **twin links concerning Maharashtra and Gujarat**. Damanganga-Pinjal Link Project benefits Maharashtra while Par-Tapi-Narmada Link Project benefits Gujarat. The Detailed Project Reports of both links are ready. Central Water Commission has completed techno-economic appraisal of Damanganga-Pinjal Link Project while the techno-economic appraisal of Par-Tapi-Narmada Link Project is in advance stage.
- Both the governments of Maharashtra and Gujarat have

finalized the MoU regarding the project

Godavari-Cauvery(Grand Anicut) link project

- Pending consensus on Mahanadi-Godavari and Godavari(Inchampalli)-Krishna link projects due to large submergence involved, alternative studies have been carried out to divert unutilized water share of Chhattisgarh State in Indravati sub-basin in Godavari basin (as per GWDT award) to Cauvery through Godavari-Cauvery link project. Technical Feasibility Note for this proposal was prepared and sent to party states in 2017

Global examples of interlinking of rivers

1. Rhine-Main-Danube canal
2. Illinois Waterway system
3. Tennessee–Tombigbee Waterway(USA)
4. Gulf Intracoastal Waterway(USA)
5. Dian Zhong Water Diversion Project(China)
6. Murray–Darling basin(Australia)